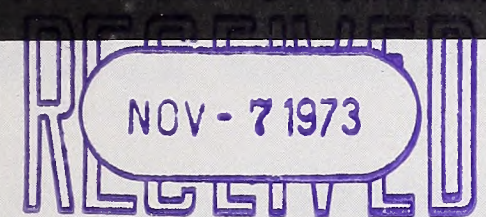


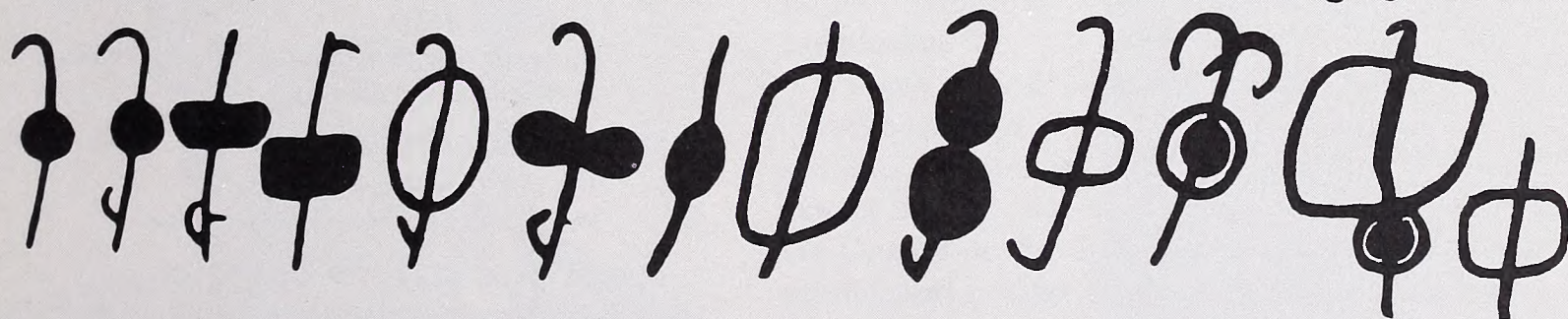
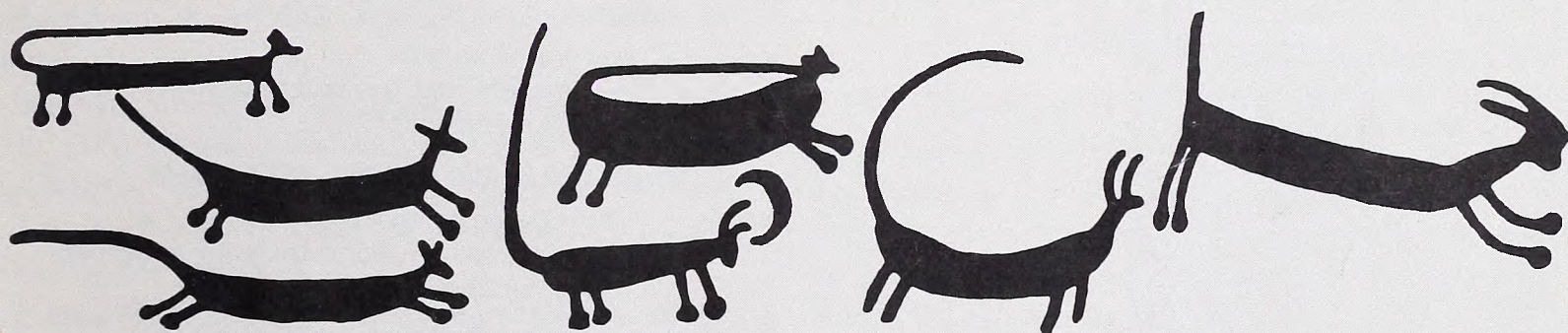
# OUR PUBLIC LANDS

FALL 1973

U.S. DEPARTMENT OF THE INTERIOR

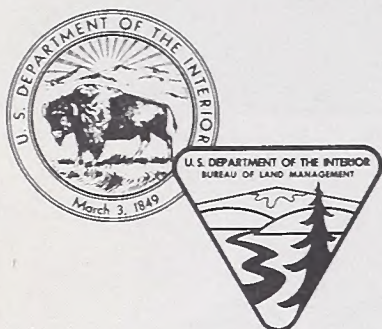


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PREHISTORIC ART  
MIRRORS ANCIENT AMERICANS  
PAGE 4





U.S. DEPARTMENT OF THE INTERIOR  
Rogers C. B. Morton, Secretary  
  
BUREAU OF LAND MANAGEMENT  
Curt Berklund, Director

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources."

The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States—now and in the future.

*OUR PUBLIC LANDS*, the official publication of the Bureau of Land Management, U.S. Department of the Interior, is issued in January, April, July, and October.

Jim Robinson, Editor

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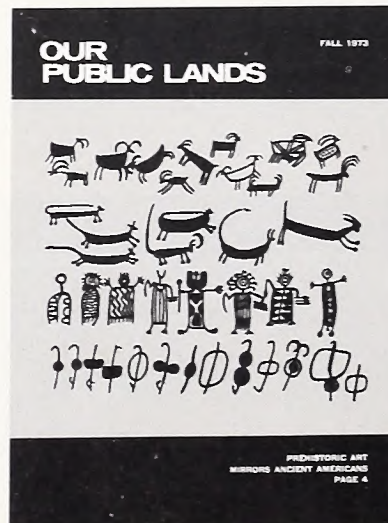
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# OUR PUBLIC LANDS

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Ancient Americans carved their life style symbols in rocks which bear the records of their existence today. The petroglyphs of the southwestern public lands are a heritage described in the article beginning page 4.

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# HIGHLIGHTS

## **Curt Berklund Named Director of BLM**

Secretary of the Interior Rogers C. B. Morton has appointed Curt Berklund, 43, of Cottonwood, Idaho, as Director of the Bureau of Land Management.

Berklund succeeds Burton W. Silcock who was sworn in July 12 as Federal Co-Chairman of the Joint Federal-State Land Use Planning Commission for Alaska.

Berklund joined the Department of the Interior in 1970. He has held several assignments in the Office of the Assistant Secretary for Public Land Management and in the Bureau of Land Management before being named to his present post.

From 1950 to 1967, he was an executive with several resource industries, basically lumbering and ranching.



Curt Berklund

In 1967, Berklund sold his assets in these resource industries and made studies of forestry and range management in 22 countries, including five behind the Iron Curtain, on behalf of Canterbury University in New Zealand and Washington State University.

## **Interior Releases Proposed 5-Year Leasing Schedule for OCS**

The Department of the Interior has released a proposed leasing schedule calling for 15 possible oil and gas leases on the Outer Continental Shelf during the next five years. An earlier leasing schedule was revised in response to President Nixon's Energy Message delivered to Congress on April 18.

Interior officials stress that the new schedule is a planning document and that no decision will actually be made to hold any sale appearing on the schedule until environmental, technical, and economic studies have been completed. The Department will also hold public hearings before any decision is made to hold a sale. Moreover, a proposed sale in the Cook Inlet of Alaska will have to await the outcome of pending litigation concerning State and Federal areas of jurisdiction.

No sale is now scheduled for the Atlantic Outer Continental Shelf or the Gulf of Alaska. However, the schedule indicates that lease sales for one or both areas may be added to the schedule as soon as possible when the Council on Environmental Quality indicates that development in these areas can proceed without undue harm to the environment.

## **New Regulations Open Forest Service Lands in Idaho and New Hampshire to Mineral Collecting**

The Department of the Interior has recently issued regulations that open two areas of acquired land in National Forests in Idaho and New Hampshire to the

(Continued on page 22)





# A HERITAGE OF PREHISTORIC ART

## *Mirror of Ancient Americans*

**T**HE AMERICAN PEOPLE are being ripped off in the California desert. A great national heritage that took more than 5,000 years to create could be destroyed in 15 years.

This heritage is a cultural one of prehistoric Indian art in the form of petroglyphs. Such records of early man's past are carved on desert rocks at several thousand sites in eastern California. The rip-off artists range from occasional souvenir hunters to black marketers with bulldozers and high-speed drilling equipment.

A start has been made, however, to save these examples of early American art for the enjoyment and education of future generations.

Preserving and protecting these petroglyphs and other natural resource heritages of California's desert land is a tough problem for the Bureau of Land Management, which is the Federal steward for this vast public land area.

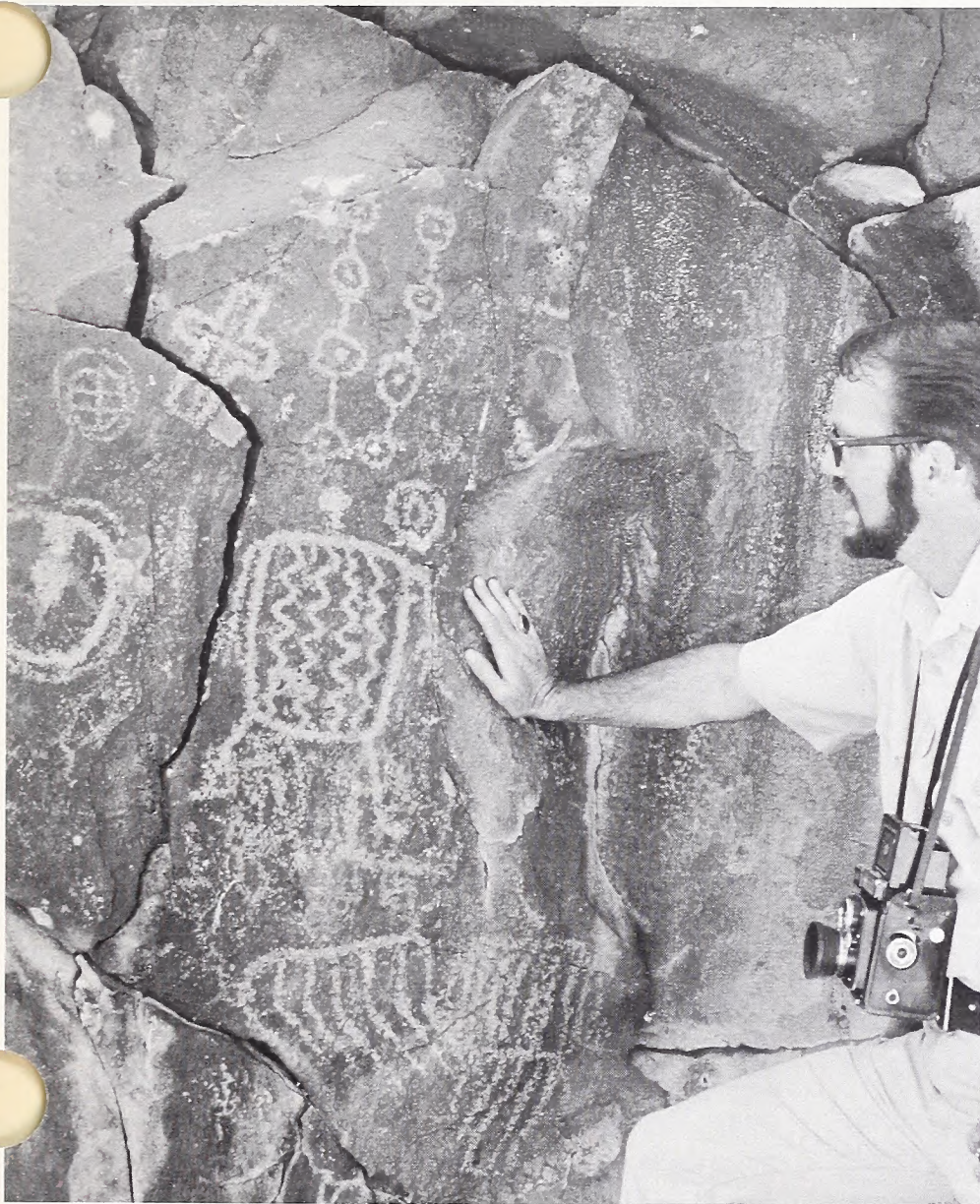
The 12 million acres of National Resource Lands sprawl through 17 million acres of desert that include

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By **TOM EVANS**  
Information Specialist  
BLM State Office  
Sacramento, California

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Eastvold's hand touches area broken off



(Top)—Petroglyph blasted by shotgun  
(Bottom)—Hole below feet was dug by  
searchers for Spanish silver

other Federal lands, some State lands, and some private ownerships.

The area has become a playground for many of California's 20 million people. With more spendable income and increased leisure time, they romp the desert lands in all kinds of recreational vehicles. Some are unaware and others too often take lightly such perils as driving their vehicles into unmarked, abandoned mine shafts or being swept to their deaths in a flash flood.

BLM must protect both the resources and the people who use these lands. The Bureau's management plan for the vast area has to be constantly developing and ever changing in continual response to an increasing pattern of people use which by 1968 had already reached 5 million visitor days.

The first step in developing a management plan was to inventory the desert's resources. The Bureau's staff was equipped to inventory mineral deposits, wildlife and its habitat, range and watersheds, the potential for irrigated agricultural use and for urban-suburban development, and rare plantlife.

But for the archaeological values, those priceless relics of ancient civilization and of the nation's history, the Bureau needed expert assistance from outside. So it contracted such an inventory from Ike Eastvold, a 32-year-old free lance writer and photographer whose studies at California's University of Redlands included comparative religions.

The great antiquity of the petroglyphs is staggering, according to Eastvold. "And yet the same symbols found in rock carvings made long before the birth of Christ are still used by the Hopi and other Indian groups today. There are the same pattern of dots, the same outlined crosses, the same rain fringe designs, and the same lightning bursts."

In contrast to the vandals and souvenir hunters, Eastvold takes nothing from the land. For at least five years, he has roamed the California desert building his inventory in a photographic documentation. In that time he has accumulated 10,000 black and white photos and 1,000 color slides of this vanishing national resource. But petroglyph destruction has been so severe in those





Vandals sprayed paint on this petroglyph

five years that he reports as many as one-fourth of his pictures could not be taken again.

"If we hadn't begun to learn what's there and how to preserve and protect it—and in viewing the mechanized invasion of the California desert by modern man—80 percent could have been gone in 15 years. Unless we are able to move quickly, we may still lose."

Just policing the desert isn't enough to stop the destruction. The solution that seems best is one of education. People must learn to appreciate without destroying.

When he first ventured into the desert, Eastvold was like most men, fearful and cautious. He even carried a rifle with him. Then he realized that his only enemy was ignorance of the desert, so he left his gun at home after that and began a serious study of the ways of the desert.

A few years later, Eastvold met another young man and his wife in their dune buggy. "They were armed to the teeth, had cartridge belts across their shoulders, a pistol at each hip, and spare automatic rifles in the buggy. The man said they both worked in the city, and saved every penny to escape on weekends to the desert.

"They had been coming to this same canyon for years, shooting anything that moved. It was their way of relaxing, blowing off pent-up urban frustrations. The man was puzzled however. He said there used to be a lot of animals to shoot at in the canyon, but they all seemed to be disappearing!"

There were also many petroglyphs in the canyon, and the young couple had been driving right by them for years but had never even noticed them. They never got out of the dune buggy to walk and look around.

Eastvold summed up the general attitude which many urbanites have toward the desert.

"Their city life has alienated them from the earth and its ecosystems. All they can relate to is the kind of thing they have constantly around them. And so they bring these things with them to the desert. They're fitted out like a small army with their motor homes, dune buggies, motorcycles, and guns. If they didn't have these, they'd be bored, wouldn't know what to do, and would feel more acutely their out-of-placeness."

Not all of the desert visitors are this way, of course. Some seek only simple relaxation; they may unthinkingly collect a souvenir or two. But in contrast to these is a vandal type who would make an interesting subject for psychoanalysis. He is the one who blasts away at the petroglyphs with a shotgun or rifle. A school of thought is developing that firearms should be prohibited wherever possible in petroglyph areas, because many of the ancient carvings are pock-marked by gunfire.

Larger pockmarks are being made at the ancient sites by treasure hunters who are looking for "Spanish silver." They do not recognize the signs that mark a very old petroglyph, so they may destroy one in the belief that it dates back only a few hundred years to the time of the Spanish presence in these lands and indicates buried silver.

A marked difference is apparent even to the untrained eye, however, because the desert air deposits on rocks a blue-black or chocolate colored patina called "desert varnish" that takes at least 1,500 to 2,000 years to form.

Old petroglyphs are covered with this patina, which



ose as recent as the Spanish occupancy will show  
 sel marks very clearly and in considerable contrast  
 to the varnish covering the rest of the rock. And yet  
 the same symbolic forms can be seen in the older,  
 darkened glyphs as in the fresher, unvarnished glyphs.

Many treasure hunters despoil petroglyphs that in-  
 clude cross shapes in the conviction that these mark  
 the spot where Spaniards buried their silver bars. It  
 is not uncommon to find a well varnished cross-shaped  
 petroglyph with a hole under it so large that it obviously  
 has been dug with power equipment.

"If Spaniards had made these cross-shaped petro-  
 glyphs, they would still look fresh. The oldest Spanish  
 inscription in the Southwest was carved on desert rocks  
 south of Phoenix more than 400 years ago. No desert  
 varnish has formed, and the inscription still looks fresh.  
 It takes a minimum of 1,500 years to darken glyphs  
 like those ancient crosses.

"Actually the cross is one of the most widespread  
 petroglyph designs, and can be found at almost every  
 site. Its use goes far back before the time of Christ, al-  
 though it is still used today in the religious symbolism  
 and native arts of many Southwest tribes. The native  
 cross has nothing to do with Christ, just as a 2-horned  
 petroglyph figure has nothing to do with the devil.

This indicates a very ancient tradition that continued  
 thousands of years virtually unbroken until the  
 coming of the white man."

Out of the experiences of inventorying the desert's  
 resources are emerging some interim guidelines for an  
 ultimate management plan. Erecting instructional and  
 interpretive signs is an obvious first.



An entire rock face, which was probably covered  
 with petroglyphs, has been torn away



(Top)—4-wheel drive club constructed barrier to  
 discourage vandals from lugging heavy petroglyph  
 away to car or truck. (Bottom)—Rip off of glyphs has been  
 haphazard, defacing rock wall

"In the past, signing programs have just warned  
 people about penalties under the Antiquities Act. The  
 reaction of some to this 'bureaucracy in the wilderness'  
 was to shoot both the sign and the petroglyph."

Instead of merely using warning signs, the Bureau  
 plans to erect interpretive signs that will blend with their  
 natural surroundings. These signs will help the visitor  
 to relate intelligently to the glyphs, give information,  
 tell him what to look for in designs, and provide tips  
 on how to photograph them.

"Using simple protective devices to block direct  
 vehicle access also is very helpful. A vandal will think  
 twice before he hauls a 100 pound boulder 200 yards  
 in the desert sun back to a parking area."

Publishing the location of petroglyph areas is like in-  
 viting the fox into the hen house. But where locations  
 already are known, establishing loop tours of petroglyph  
 areas is a wise way to protect the sites. Surprisingly,  
 the experience of other States in developing petroglyph  
 sites for visitation shows that major vandalism de-  
 creases with a steady flow of visitors. A self-policing





New carving at top, very old and well-darkened glyph under it

effect is set up which makes the crowbar and hammer set nervous about being spotted and reported by the next visitor.

Just why are these petroglyphs worth saving? Eastvold cited some of the more remote desert tribes, such as the Hopis and Yaquis of the southwestern desert region, who are still closely tied by tradition to their ancient predecessors. He said that the Third Mesa Hopis of northern Arizona, for example, constitute a living mirror of ancient America.

One village has steadfastly turned down modern conveniences, such as telephones, electricity, and modern sewage systems, because they feel such things eventually would destroy their tribal life-way. They lead a real bedrock life.

"They are still deeply involved in the ancient life-way, gathering native food plants, and growing corn, beans, and squash without irrigation in the Arizona desert. They have been living on the same mesas for more than 1,000 years, and they still preserve almost intact their elaborate yearly cycle of ceremonies.

"Today, when Third Mesa Hopis finish their harvest, the initiated men make a pilgrimage to Sipapu, their place of emergence from the underworld long ago, located physically near the juncture of the Little Colorado and Colorado Rivers. There are many shrines along the route."

At the first stop, which is called Mountain Sheep Ancestor Shrine, each man makes a petroglyph by cutting his clan symbol through the black desert varnish on red sandstone boulders. He makes the symbol of a bear claw, or a coyote head, or a bird—whatever represents his clan—alongside the symbol he made the year before.

"When he makes this clan symbol petroglyph, he connects himself with all nature, with the entire life

of the universe. The symbol is not an ego identity but a collective identity. It is the collective communion between all clan members, living and dead. Thus, by making his own petroglyph, he prepares himself to contact the Sipapu where all life originated. Some of the types of glyphs we find in eastern California closely resemble those Hopi clan symbols, and probably have equal importance to people of the ancient cultures.

"Other pueblo peoples like those living along the Rio Grande in New Mexico still make petroglyphs, also. A man may isolate himself at a sacred cave or shrine and fast until he has a powerful vision or dream. When he comes out, he might make a petroglyph to record what he saw. Such a glyph would be understood by other members of his tribe. But a modern man is puzzled today by such glyphs, simply because he is ignorant of the spiritual traditions of ancient America."

Eastvold believes that the petroglyphs in the California desert go back in age at least to the Pinto-Gypsum archaeological period, 3,000 to 7,000 years B.C. Very faint petroglyphs, indicate great age.

"You can tell it is an extremely ancient tradition of symbolism because many of the glyphs are completely darkened."

In the southern California desert there are as many as 50 major areas with more than 2,000 sites that could be developed for visitor use. The emerging system of interpretive desert way stations and desert rangers is regarded as a step in the right direction to help visitors understand and appreciate the desert.

"Petroglyphs can be an important part of any interpretive program in the desert. The sites are usually located at strategic points in the ancient land-use pattern: near water, food gathering areas, or major trails. When viewed in such a context, it's easy to understand how the land all fitted together to provide a satisfying human life for the ancient people. Modern man can be led to see that the desert is not a boggy; indeed, it was once some Indian's backyard."

"When people live in intimate contact with all the earth, it opens a kind of bedrock of human experience in them. The petroglyphs came from and point to that bedrock experience, to what is unchanging between man and the earth.

"Perhaps the chief value in preserving these ancient petroglyphs for modern man is that they might point him back to that bedrock of human experience. Perhaps in coming to these desert areas and contacting the symbols of the ancients, he can learn to see the earth through their eyes, and discover what is unchanging between himself and the earth." □



# Coast Guardsman Missing-Find Him!



Top of the Dome and surrounding cliff

## ***Then the boom released the oil spill debris***

**S**ULLEN, LOW-SCUDDING clouds and intermittent rain showers dominated the forbidding landscape at 7 a.m. on Wednesday, October 18, 1972. Bob Dalla and I were the BLM members of an inter-agency team assembled to handle the problems caused by a Texas-New Mexico Pipeline Company oil spill on the San Juan River in southeastern Utah.

The cleanup operation of oil-soaked debris—brush, twigs, and clumps of grass washed along in the path of the spill—was progressing well that morning. Dr. George Rice, coordinator for the Environmental Protection Agency, had given BLM two assignments: (1) locate and mark a site above the potential high water line of Lake Powell where the debris could be buried under three feet of soil, and (2) assist the Coast Guard in setting up a communications net that would tie the operations on the river directly to the operations base at Kayenta, Arizona.

To establish sure communication, David Cuffaro, a U.S. Coast Guardsman, was to be flown by Army helicopter to Nokai Dome, a mesa overlooking the operations. We issued a small portable radio to Cuffaro so that he could receive radio messages from the cleanup

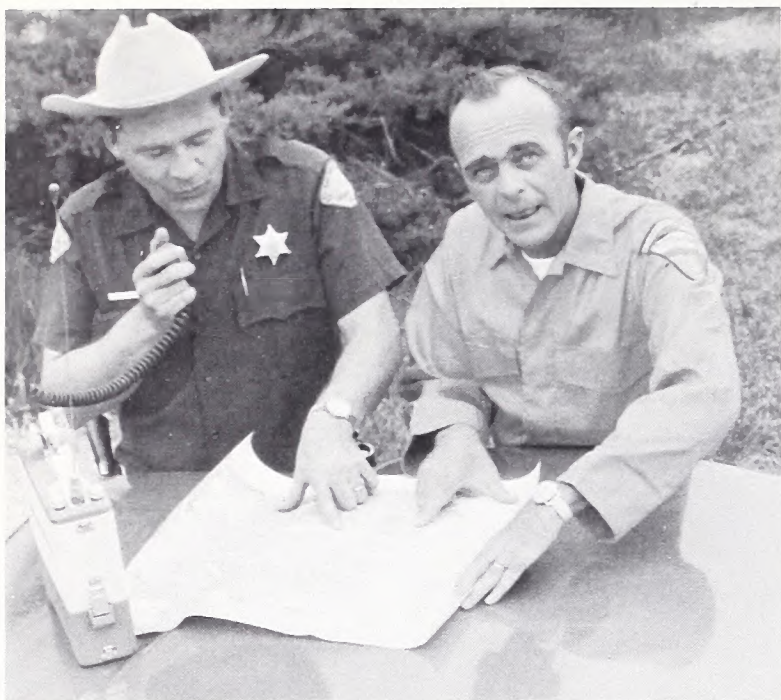
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By **ROBERT J. BROCK**

San Juan Resource Area Manager  
BLM District Office, Monticello, Utah

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Sheriff Wright and Bob Dalla planning day's search efforts

site via Coast Guard radio and relay them to the Monticello District Office. The last leg of the communications net would be by telephone to operations base at Kayenta.

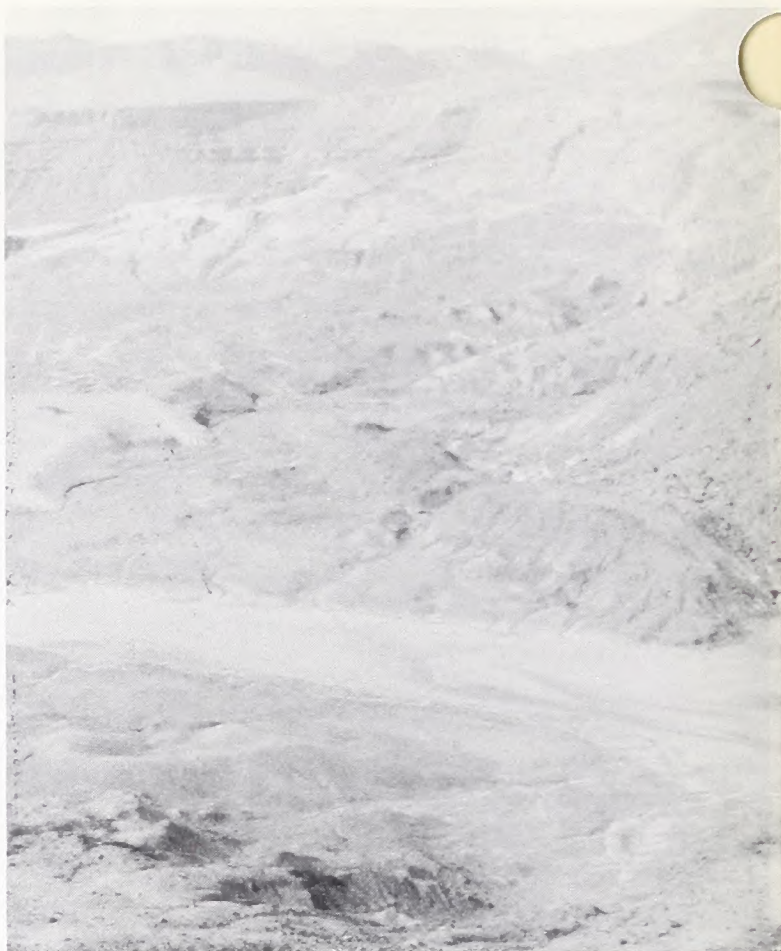
That morning the clouds had the top of the Dome socked in, so the helicopter had to land about 200 yards north of the desired spot. Cuffaro received detailed instructions as to the direction and distance to the rim overlooking the river. He was also advised whom to contact on which radio frequency and of a pickup time before dark. Cuffaro began relaying messages from the Dome as he searched for the rim overlooking the river.

Then Dalla and another Guardsman searched for a second relay point that could relay messages directly from Cuffaro to Kayenta. But due to the heavy clouds which made such a search fruitless, this idea had to be abandoned for the day.

At 2:14 p.m. Cuffaro indicated that he was lost and was still looking for the rim. This was Cuffaro's last radio message.

Dalla and I were trying to contact Cuffaro, so we returned to the river as soon as flying conditions allowed; but the Dome remained socked in. Because we hoped for clearing conditions before dark, we remained at the river while the helicopters started ferrying out the crews for the night. We let two EPA employees and another Guardsman go in the first helicopter and waited for the last one to leave.

At 7 p.m., Dalla and I in the pipeline company helicopter took one last fruitless look around the cloudy Dome in the approaching dusk. We returned to Kay-



San Juan River with Nokai Dome at upper right

enta, concerned that Cuffaro was spending a lonely night on Nokai Dome—but there was no alternative.

Meanwhile at 7:15 p.m. the Army helicopter which took out the EPA employees and the Guardsman crashed in a storm near Monument Valley, Arizona.

All four aboard were injured. Months later, John Cunningham of EPA was still in a cast with broken vertebrae.

At this point Dr. Rice reported: "Rained all day. One man lost. One helicopter wrecked and four men injured. Now all we need is to lose the boom holding the oil slick."

And then at 10 p.m. flood waters hit the boom and washed the oily debris on into Lake Powell.

It was at this point that the entire operation threatened to come unglued. With a missing man to find and the cleanup effort become more widespread, Dr. Rice requested the San Juan County Sheriff to organize a search and rescue mission for the lost Coast Guardsman. He asked BLM to coordinate the search effort. The other forces could then concentrate on catching up with the oil. Sheriff Rigby Wright would be in charge on the ground. Dalla would be the aerial observer, weather permitting, and I would remain in Kayenta to coordinate the effort.





Trail disappeared on solid rock. Cuffaro fell down cliff in the draw in center of photo

On Thursday morning the sheriff, a deputy, and BLMers Carl Mahon and Ken Moore arrived on the Dome after driving most of the night. Mahon soon located Cuffaro's tracks and followed them for some five miles. At this point they were near the rim of the Dome on solid rock. From there the river could be seen some 3,000 feet below. But no feasible way could be found to get down the 15-foot-high cliff to the talus slope that led into the river.

Later we learned that Cuffaro slipped and fell this 15 feet into a creek. He had to drop both his coat and the BLM radio in order to get out. Neither could be found in the swollen waters of the creek.

The air search was being hampered by both the weather and mechanical failure of the helicopters, and it wasn't until late afternoon that Dalla arrived on the Dome to assist in the search. The clouds then moved back in, forcing the helicopter to land and spend the night on the Dome.

That night we reorganized our search efforts, because we feared that Cuffaro had apparently wandered off the Dome. We figured that after he had been exposed to two cold nights in that rough terrain we had better get more ground searchers and air support to start looking for either an injured man or a body. The Air Force Search and Rescue Team could not assist, so Sheriff Wright activated his posse. The Army brought in a large helicopter to move the men.

By Friday morning Sheriff Wright had 25 men on the Dome in a well-organized search effort. With clear weather at last, Dalla was in the air.

About 10:30 Friday morning—two days after the operation began—Cuffaro made his own way into the

cleanup operations camp on the river. He was quickly flown to the hospital at Monument Valley for a checkup. He was cold and tired, his feet hurt, and his hands and face were scratched, but his only comment after the two nights was, "I'm hungry."

And so what began as a routine resource management assignment turned into a dramatic search for a missing man, but ended on a happy note instead of a tragedy when the man returned. □

The Texas-New Mexico pipeline runs 500 miles between Aneth, Utah, and Jell, New Mexico. At the latter end, it ties into other pipeline installations and carries its cargo of crude oil to refineries.

There has been only one other spill on the line in 20 years, a break in 1965. The 1972 spill was caused by a factory defective seam which was detected by a loss of pressure registered on gauges which monitor the flow. Company officials searched for and found the break by flying along the line.

The actual spill occurred across the New Mexico border. The crude oil ran down a feeder stream 3½ miles, and much of the spill was caught before it entered the San Juan River.





# Who Says Scattered Land Patterns Are Bad?

## *Youngsters and ducks approve of multiple use management*

**T**EENAGERS WHO live in the Spokane metropolitan area know birdlife mostly as lawn robins and tree sparrows, and their knowledge of wildlife habitats is confined to landscape planting around a house or an occasional city park.

But 40 miles away in east-central Washington's Lincoln County, abundant wild birdlife thrives in a number of potholes on National Resource Lands administered by the Bureau of Land Management.

BLM for several years has joined the Washington State Department of Game in providing a conservation education outing for Spokane youth by involving them in a duck banding project around these potholes.

The young enthusiasts learn to identify species and sexes while they become familiar with habitat requirements and learn how the banding program enables the Game Department to establish migratory patterns.

To city-bred youth, the experience is unique. One recent summer the unseasonably cool July air rang with the too-loud laughter of enthusiastic children even

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By **WAYNE ELMORE**

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though their task was to capture slow waddling ducks leaving the water.

But once the importance of remaining silent was impressed upon the youngsters, they crouched in the underbrush, impatiently waiting for the ducks to beach their broods.

The group of 12 youth, four adults, and a pair of dogs was poised for the assault as the ducks made their way ashore. The mallards were the first to leave the friendly waters, then the blue winged teal and the gadwalls. But the cautious redheads and widgeons clearly were not fast decision-makers. They circled or reversed their approach, trying to decide whether to dive or seek the safety of the nearby sagebrush while the youngsters fidgeted in their hiding places around the foul-smelling marsh water.

After what must have seemed an eternity to a boy with a dip net and no duck in it, the word was given: "Go get 'em!"

Immediately the group charged, scattering widgeon grass and smart weed and splashing water in their path. Down to the water's edge they raced, shaking seeds from bullrush plants in passing. Yellow-headed blackbirds scolded them when they came too close, and the youngsters checked their headlong charge to search out the source of the noisy challengers.

When the immediate assault was over and the hunting dogs collected the stragglers, the count was 13 ducks for banding and a dozen breathless, excited kids.

And then the group moved on to the next public land pothole, maybe just across the way, perhaps beyond adjoining private lands, sometimes on the other side of some State land.


Scattered land ownership is the pattern in this part of the State of Washington: State land, Federal land, and privately owned land. At first glance, the shotgun pattern would seem to be an administrative burden, but a second look reveals it to be a valuable resource management opportunity.

These lands have tremendous wildlife and recreation potential. In this part of the State alone, the Bureau administers about 305,000 acres of public domain. Salmon and steelhead use 100 miles of stream frontage along these public lands for spawning, and the Bureau administers a total of 160 miles of lake and stream frontage.

With high population densities in contrast to low public ownership, great demands are now being made upon the remaining wildlife habitat. In many areas in Washington State, scattered parcels of the National Resource Lands provide the only escape cover available for wildlife and the only public access to these waters.

These lands have been carefully studied and have been classified for multiple use management. For the wildlife which find food and shelter on these public lands, this management decision is a winner. The dozen city youngsters who are picked each year to help in the banding project would endorse the decision, too. They figure this land is for the birds. ☐





# Wheelchair Fishermen, Take Note!

## *Recreational development with a concern for handicapped*

**D**ISABLING ACCIDENTS have closed many doors to physically handicapped people until very recently.

But now a new awareness that being physically disadvantaged need not mean also being physically isolated is changing old attitudes—and one of the changes involves making it possible for handicapped people to enjoy outdoor recreation.

The Bureau of Land Management, along with many governmental agencies which provide outdoor recreation opportunities, is beginning to design and develop facilities which are almost as accessible to the handicapped as to the able-bodied.

Many of the Bureau's recreation developments have been in use for years, but newer ones are being designed so as to eliminate manmade barriers to their use by handicapped people.

Trails are being blacktopped instead of gravelled. Ramps for wheelchair recreationists are being con-

structed instead of stairs. Picnic shelters and restroom facilities are being designed with the needs of physically handicapped people in mind. So are parking lots.

One of BLM's newer outdoor recreation sites, Wildwood in Oregon, is typical of this care in design. And Wildwood was chosen recently for a personal visit and study by two Australian architects who are inspecting American progress in making outdoor recreation available to physically disadvantaged persons.

A cooperative development with the Western Rod & Reel Club was another showcase development the Queenslanders visited. At the famous Blue Hole fishing site on the Deschutes River, they saw firsthand a platform for wheelchair fishermen which is cantilevered over the water for fishing access. A specially designed restroom is adjacent to the parking area at Blue Hole.

Not all recreation facilities can be adapted to the needs of handicapped visitors. Sometimes, for example, Nature has placed boulders too close together for a wheelchair to roll between them on a trail.

But as the Australians found, the public lands which have always provided quality outdoor recreation are now beginning to provide more and more recreational opportunities to the aged, infirm, and handicapped.

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By IRVING W. ANDERSON

Chief, Branch of Lands and Minerals Operations  
BLM State Office, Portland, Oregon

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# Old Rivers Present New Thrills



## *Whitewater racing is a bounty of Nature's grand design*

ONE MOMENT the kayak is drifting in the increasing current, then a sure arm drives the wide paddle blade deep into the foaming water, and the fragile craft seems to come alive as it darts forward.

On the shore, a poised thumb plunges down on the stopwatch—it's the beginning of another whitewater race against time and Nature's perils.

Whitewater boat racing thrills both spectator and racer alike. In this sport the competitor's skills are pitted against both time with other racers and the hazards of boating in a current that boils and foams through shallow rapids in a boulder-strewn stream.

Nature's grand design for draining the western slopes of the mighty Sierra Nevada mountain range has provided a bounty of whitewater boating opportunities.

Racers come from all over the United States to compete on the whitewaters of seven rivers that flow across National Resource Lands in the historic Mother Lode country of north-central California.

All of these rivers flow ultimately into the Golden State's two watercourses, the Sacramento and the San Joaquin Rivers which join in a delta region and twist their way north and west to the San Francisco Bay and on into the Pacific Ocean.

The American River, where the discovery of gold precipitated the 1849 gold rush, is one of the south-flowing tributaries of the Central Valley which merges into the Sacramento. The other is the Yuba.

Farther south in the great Central Valley, five more rivers plunge down the shoulders of the Sierra Nevada. They are the Merced, Tuolumne, Consumnes, Stanislaus, and Mokelumne Rivers which join the mighty San Joaquin as it flows north to meet the Sacramento.

Races may draw from 25 to 60 competitors, and twice as many spectators may line the banks to watch time competitions in canoe and kayak races or slalom races. In slalom competitions, the kayak racer attempts to maneuver his plunging craft between 24 "gates" formed by poles suspended from ropes which span the swiftly-flowing river.

Official streambank observers assess penalty points if the kayak fails to negotiate a narrow gate or brushes one side of a gate in passing. The slalom winner is determined by the lowest total reached when the time and penalty points are added together.

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By **DICK HARLOW**  
BLM District Office  
Folsom, California

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Upsets with accompanying wettings are not uncommon, but serious injury occurs only if a racer loses control of his kayak and slams into a partially submerged boulder in the stream.

Racers are required to wear safety helmets and life jackets or other flotation devices, but being chilled after an upset in snow melt-fed streams is a greater danger than colliding with a boulder.

First-time observers of a whitewater race may not note the difference in the crafts as they careen down the surging rivers.

Such racing craft look alike from the streambank, differing only in whether they have slots for one racer or two. However, the racing canoe has a keel for stability in the current and is controlled with a single

blade paddle. The kayak has no keel, and is maneuvered with a double blade paddle.

These two craft are used in as many as 16 different classes of racing, with events for women or events for men.

The ultimate goal of many of the serious racers is either a world championship or the Olympic Games.

The whitewater rivers flowing across public lands in California have long been known to early settlers as sources of placer gold, of water for some of the grinding processes to separate mineral ore from rock, as avenues of commerce and transportation, and in later times as sources of recreation.

Now the rivers are providing a new lure to draw visitors through the whitewater boating opportunities. □





Helitack is protecting  
the Little Rockies



## A Solution to 'Lightning Alley's' Fire Potential

**A** SCANT HUNDRED miles south of the Montana-Canadian border lies notorious "lightning alley."

It's a wide prairie corridor that is highly susceptible to lightning strikes and resulting wildfires because of its location between mountain ranges. The fire danger problem occurs when clouds with lightning potential build up over the mountains to the west and begin blowing east across the Missouri River Breaks and down the corridor.



But in spite of its high fire danger rating, lightning alley is popular with people.

Tucked onto one edge of lightning alley is a scenic pine-covered mountainous island called the Little Rockies. Little it is indeed, both in height and area. The mini-mountain on the prairie has no peaks which reach as high as 6,000 feet, and the entire mountain range of 60 square miles is only about one twentieth the size of the entire State of Rhode Island.

But the 30,000 acres of the Little Rockies have unique recreational opportunities. There are cool uplands, sparkling streams, and a true slice of the Old West in two mining camps, Zortman and Landusky. These two towns were once public lands but are now communities in which the residents have gained legal patents to their homesites (See "Landusky and Zortman Are Legal Now," OUR PUBLIC LANDS, Spring 1971).

Because the area has these unique historic and recreational values, the Bureau of Land Management is using sophisticated fire suppression techniques to protect and manage the resources that attract so many visitors from across northern Montana. History has showed the need for such care.

Thirty-six years ago, two wildfires denuded 75 percent of the Little Rockies. The first fire started in the lodgepole area on Ft. Belknap Indian Reservation Lands on July 25, 1936. There had been berry pickers in the vicinity, and the fire was thought to be the result of a discarded cigarette. An area of 8,045 acres was burned, and this fire also caused the deaths of three men. The Federal fire suppression team approach was yet an infant, so personnel from the U.S. Department of Agriculture's Forest Service, Civilian Conservation Corps, workers from Neihart, Montana, miners, and local residents—every available man in Phillips and Blaine Counties—were called on to fight the blaze.

This fire was considered under control and almost out when, on the morning of July 29, the second fire started as a result of a discarded cigarette close to the tent of a miner near the Little Ben Mill in Ragtown. The embers were fanned by a rising breeze into flames which quickly consumed the tent and spread into the adjacent gulch, developing in a few hours into a fire far surpassing in intensity the previous blaze which had menaced the entire area for four days. By that evening, the fire had spread north to the edge of the prairie, about nine miles from its origin.

Residents of Zortman and Landusky hastily loaded what property they could into cars and trucks and drove to the adjacent prairie country. Numerous piles of belongings were left laying in the open country, and the owners went back to fight the fire or to gather the rest of their property.

By this time the fire was spreading at a rate of nearly 1,000 acres per hour. Regardless of the manpower available, it was obvious that control was impossible under such burning conditions. A number of fire fighters were injured. It was nearly a week before the fire could be considered out, but Zortman and Landusky were saved along with the Ruby Gulch and Little Ben Mills and equipment.

Both fires were man-caused and preventable. Zortman had no communication system to call for help in fighting the blazes, and there was a lack of organized trained crews and equipment. Had there also been some type of public fire prevention program, this fire might have been extinguished before it became so extensive. BLM's Malta District has been increasing its fire suppression capacities and pre-suppression activities in this area to keep history from repeating itself.

A big step forward was taken in 1969 when the District first contracted for the use of a helicopter in fire season. The rugged terrain of the Little Rockies makes fire fighting access difficult and time-consuming for men and equipment on the ground, but a helicopter allows a fire crew to zero in on a fire within minutes after it is reported.

This past summer, the Bureau of Land Management had a helicopter stationed at Zortman from June through September. The ship can carry three helitack fire fighters. Their tools fit in external racks. The helicopter is equipped with a water bucket which can carry 110 gallons of water beneath the ship to drop on a fire. The pilot can fill the bucket at the nearest water source (usually a reservoir) without landing, or use the bucket to rescue a stranded fire fighter. The helicopter is also equipped with a cargo net to carry equipment and supplies such as rations, tools, clothing, and fuel to ground crews.

Six helispots (landing areas) with inter-connected foot trails have been built at strategically located areas in the Little Rockies so that the pilot can land an initial attack crew and equipment.

District officials know that a fire of the size and velocity of that in 1936 could happen again. They feel, however, that modern firefighting techniques and equipment in the Little Rockies are protecting this historic and scenic gem in the striking zone of lightning alley. □

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By SHIRLEY MARSH

Clerk-Stenographer  
BLM District Office, Malta, Montana

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## *Undaunted sixth graders had their environmental camp anyway*

**N**EITHER RAIN nor sleet nor bad weather of any kind could conceivably have stopped the sixth grade of the Pikes Peak public school in Colorado Springs from holding its annual outdoor education camp last spring.

But a record winter snowfall, coupled with an almost overnight thaw, with the added impetus of heavy spring rains which wiped out bridges just as the school term neared its close—well, the 1973 outdoor project appeared to need some serious rethinking.

Now the 120 sixth graders and their 10 teachers had worked unceasingly for almost 9 months on a series of raffles, movies, candy sales, and auctions to raise \$1,500. This was the money they needed to finance the week of camp.

They had remained undaunted by the large sum of money needed, and they were not to be thwarted now by a mere trifle like capricious weather.

Originally the camp was scheduled for early May in the Pike National Forest northwest of Colorado

Joseph G. Cresto's stuffed porcupine looked particularly lifelike

## **The Weather Didn't Make Any Difference**







George W. Nelson helped youngsters identify plantlife



Rapt attention was paid to James Burd's gold panning demonstration

Springs. But when the catastrophic weather wiped out several bridges spanning Horse Creek, access to the camp site became impossible.

Hurried scouting of accessible sites followed, and Elephant Rocks was chosen as the alternative. Elephant Rocks is located in the forested foothills near the Air Force Academy. The camp site is a Salvation Army property which has adequate sleeping facilities, a well-equipped kitchen, and a telephone.

The telephone was a necessity, not for the use of homesick kids or over-anxious parents, but as a link to quick and efficient medical care in case of an accident or illness. Fort Carson, an Army installation just south of Colorado Springs, had agreed to a standby alert of medical personnel and a medical evacuation helicopter during the 5 days of camp. A phone call from Elephant Rocks would bring the chopper, doctor, and aid men to the campers within minutes.

By this time, only the last week of school was left for the camp, but Principal Larry Faubion was as determined as the children that they have their outdoor education experience. Schoolbuses, the only expense borne by the school district, brought the children and teachers to Elephant Rocks on a day that promised good enough weather for the outside sessions.

Since the start of the Pike's Peak outdoor project 3 years ago, BLM personnel from the Canon City District Office have each year provided a day of profes-

sional instruction pertaining to their own specialties. Although the accompanying teachers have some knowledge of the various environmental fields, there was general agreement that the "BLM men always gave the kids the most interesting day."

Four Bureau specialists, three from the Canon City District and one from the Colorado State Office in Denver, had already spent many hours "casing" Elephant Rocks area and deciding how best to fit the specialties of geology, zoology, forestry, and range management into the environment of the camp site.

On BLM staff day, the weather turned sour. The day, the third day of camp week, started with rain that quickly became snow, so James Burd, geologist from the State Office, hastily assembled inside the large dining room a collection of rocks and minerals typical of the Elephant Rocks area. He also gave his gold panning demonstration there.

In another part of the dining room were a variety of animals native to this portion of Colorado, and they were so expertly stuffed that they looked ready to jump from their positions around a fireplace where Joseph G. Cresto, BLM wildlife expert, had placed them.

Meanwhile with another group of students, BLM Forester John L. Hayes was using small trees and plants to explain the flora, and a fourth group was listening to George W. Nelson, range management specialist, as he showed certain specimens that pertained to his work.

Lunch, with a professional chef assisted by students and teachers, was accompanied by a welcome change in the weather, and the afternoon sessions moved outdoors to the type of classroom originally planned for this unique environmental education camp. □

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By REVA J. CULLEN

Information Specialist, Public Affairs Staff  
BLM State Office, Denver, Colorado

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# FIRE CONTROL SPINOFF

## *Ponds and helicopters for Alibi lkes*

**S**OUTHWESTERN OREGON fishermen are benefiting from a spinoff of a fire control measure newly instituted this year.

The Bureau of Land Management has built ponds in the higher elevations of forested areas to catch and store rainfall. These ponds are so located that specially rigged helicopters can hover while scooping water into a hanging bucket and fly back to dump the water on a wildfire.

The Oregon State Game Commission decided to stock several of the ponds with trout early enough last spring to let them grow to legal size by summer. The experiment was limited to 11 of the 52 ponds to see if the idea would catch on. Most of the ponds are less than an acre in size, and not all of them are suited for fish.

Since the primary purpose of the ponds is to provide a water supply for fire suppression, fish production is a secondary use and could have some limitations.

A particularly bad season could use all the water in a pond. Some sites don't hold water all year, and

others freeze completely in the bitter winters of the high Cascade Range.

For the fishermen looking for something new, however, the idea seemed worth trying, and both agencies are optimistic that this new multiple use concept will prove to be worthwhile.

There are no detailed maps available, but information about the location of the pools is available from any local office of either agency.

Now ingenious fishermen will have a new excuse about the one that got away: "I know it sounds phony, but I had this real monster hooked, you see, and then just as I yanked him clear of the water this helicopter appeared from out of nowhere and . . ."

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By JOHN E. GUMERT

Information Specialist  
BLM State Office, Portland, Oregon

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(Continued from page 3)

collection of gemstones which are coveted by mineral collectors.

The two areas are the Emerald Creek Garnet Area on the St. Joe National Forest in Idaho and the Moat Mountain Smokey Quartz Area on the White Mountain National Forest in New Hampshire. The U.S. Department of Agriculture's Forest Service requested the Department of the Interior to issue the regulations so that the two areas could be opened to mineral collecting, since the Department of the Interior is responsible for issuing regulations to permit mineral collecting on acquired lands in the National Forests.

The new regulations authorize the Director of the Bureau of Land Management to establish a fee to be charged to collectors, and in cooperation with the Chief of the Forest Service to impose such conditions on the permit as they deem necessary. The conditions of the permit will:

- Limit the amount of material that a single collector can remove from an area within a given period of time,
- Regulate the kinds of tools and equipment that can be used in the areas,
- Prohibit the use of explosives,
- Protect the use of other resources,
- Provide for the general safety.

Under the regulations, permits for collecting in the area will be available from the appropriate District Rangers. The areas covered by the regulations will be marked with boundary signs, and maps will be available from local offices of the Forest Service.



This is a compilation of the most up-to-date information possible on upcoming sales of public lands by State Offices of the Bureau of Land Management. For details of land descriptions, prices, and other information pertinent to sales, you must write the individual State Office concerned. Sale notices provided by State Offices will point out, insofar as possible, problems relating to (1) access, and (2) adjoining owner preference rights, and other pertinent information. A listing of BLM State Offices with addresses is found on page 23. When possible, all sales are scheduled far enough in advance so that ample notice can be given in OUR PUBLIC LANDS. Sales listed can be cancelled on short notice for administrative and technical reasons.

**Adjoining landowners have first rights in purchasing public land advertised for sale, and in many cases will prefer to exercise this right.**

## EASTERN STATES

Virtually no public domain lands in the Eastern States are available for public sale. Should any of these lands become available in the future, sale notices will be listed when the sales are scheduled. The Eastern States include all States east of North Dakota, South Dakota, Nebraska, Colorado, and New Mexico.

## ARIZONA

Six isolated parcels, identified as AR 034314, comprising Tract No. 1—142.6 A, Tract No. 2—14.62 A, Tract No. 3—24.34 A, Tract No. 4—5.13 A, Tract No. 5—107.18 A, Tract No. 6—36.27 acres. Appraised ap-



proximately \$75.00 to \$100.00 per acre. These parcels located in Yavapai, Coconino, and Mohave Counties approximately 10 miles southeast of Peach Springs within 5 or 6 miles of U.S. Highway 66. Access by ranch roads and 4-wheel drive trails to tracts 2 and 3; other tracts can be reached by foot or horseback only. Terrain hilly to mountainous, elevation 5100 to 5700 feet. Vegetation consists of pinyon pine, juniper, and native grasses. No available utilities.

5 A, identified as A 6155, located in Maricopa County about 1 mile east of the Black Canyon Freeway in New River, Arizona. Appraised approximately \$5,000 to \$6,500. Vegetation typical of lower Sonoran Desert variety, soil is rocky. Elevation 2080 feet. Graveled road, electricity and phone lines within 1/2 mile of the property.

## CALIFORNIA

Numerous parcels in northern and central California which did not sell when offered at public sale the first time are available for bid between 10 and 11 a.m. each Thursday.

Free listing available on request from California State Office (see list on page 23).

## MONTANA

10.44 A, identified as M 23396, isolated, located in Powder River County, Mont., about 12 air miles southeast of Kealeka and 50 miles north of Alzada. Topography fairly level rolling slightly to the southwest. Silt loam and clay loam soils. Vegetation primarily grasses consisting of western wheat, blue grama, green needle, june little blue stem, and smooth brome. No water or legal access. Past use has been livestock grazing. Write Montana State Office for cost and other details. Sale to be held after Dec. 15, 1973.

10.44 A, identified as M 2536, isolated, located in Carbon County, Mont., about 8 miles south of Roscoe. Tract located in rolling foothills. Soils are shallow, sandy loam to coarse gravel. Tract is odd shaped which extends from top of rocky point out into lower grassy area. Upper one-third of rocky area covered by scrub stand of Douglas fir and limber pine with some lodgepole pine and aspen. No water or legal access. Past use has been livestock grazing. Write Montana State Office for cost and other details. Sale to be held after Dec. 15, 1973.

40 A, identified as M 2559, isolated, located in Carbon County, Mont., about 5 miles north and east of Roscoe. Tract nearly level except for southeast corner which dips into a draw. The vegetation consists of bluebunch wheatgrass, Idaho fescue, sandburg bluegrass, clubmoss, and shrubby cinquefoil. No water or legal access. Past use has been livestock grazing. Write Montana State Office for cost and other details. Sale to be held after Dec. 15, 1973.

## BUREAU OF LAND MANAGEMENT

ALASKA:  
555 Cordova St.  
Anchorage, Alaska  
99501  
District Manager

P.O. Box 1150  
Fairbanks, Alaska  
99701

ARIZONA:  
Federal Bldg.,  
Room 3022  
Phoenix, Ariz. 85025

CALIFORNIA:  
2800 Cottage Way,  
Room E-2841  
Sacramento, Calif.  
95825

COLORADO:  
1600 Broadway  
Room 700  
Denver, Colo. 80202

IDAHO:  
Federal Bldg.,  
Room 334  
550 W. Fort St.  
Boise, Idaho 83702

MONTANA (N. Dak.,  
S. Dak.):  
Federal Bldg.  
316 North 26th St.  
Billings, Mont. 59101

NEVADA:  
Federal Bldg.,  
300 Booth St.  
Reno, Nev. 89502

NEW MEXICO (Okla.):  
Federal Bldg.  
P.O. Box 1449  
Santa Fe, N. Mex.  
87501

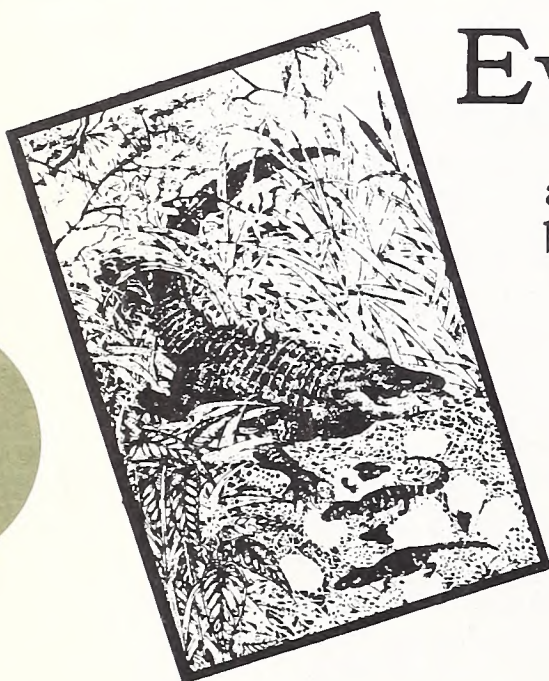
OREGON (Washington):  
729 Northeast  
Oregon St.  
P.O. Box 2965  
Portland, Ore. 97208

UTAH:  
Federal Bldg.  
125 South State St.  
P.O. Box 11505  
Salt Lake City, Utah  
84111

WYOMING (Nebr.,  
Kans.):  
2120 Capitol Ave.  
P.O. Box 1828  
Cheyenne, Wyo.  
82001

ALL OTHER STATES:  
Robin Bldg.  
7981 Eastern Ave.  
Silver Spring, Md.  
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